

CATH DE LITTLE

ZINC

Element Symbol: **Zn**

Atomic Number: **30**

An initiative of IYC 2011 brought to you by the RACI



www.raci.org.au

ZINC

Element symbol: **Zn**

Atomic number: **30**

The use of Zinc goes back to prehistoric times when it was alloyed with copper to make brass. The pure element was first cast in India in the 13th century; it was made by heating calamine (ZnCO_3) and wool. The modern discover of the pure element is generally credited to a German chemist by the name of Andreas Sigismund Marggraf in 1746. The element is thought to have been first named by Paracelsus (an alchemist of the medieval period) after the German word “Zinke”. Zinke means tooth like or pointed (like zinc metal crystals).

Zinc is mined from sulphide ore deposits as sphalerite (ZnS) and usually is found with lead, iron and copper sulphides. The “Red Dog” mine in Alaska is the biggest zinc mine. Australian mines include Century, Mt Garnet, Lennard Shelf and Broken Hill. Future mines are likely in Australia at Dugald River Nth.Qld and Admiral Bay W.A.

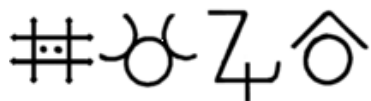
Zinc was first used in the metal alloy brass (for weapons and coins), however its greatest use is in coating steel to prevent corrosion (galvanizing), zinc is also used in batteries, cosmetics, paint pigment (white), brass (taps etc.), precision die casting for the automotive industry and nutritional supplements.

Zinc is separated from its ores at refineries, Australian examples are Sun Metals Zinc Refinery (Townsville, Qld, newest zinc refinery and most efficient), Port Pirie (S.A.) and Risdon (Tas.)

Work by the Italian Doctor Luigi Galvani and his friend Alessandro Volta uncovered the electrochemical properties of zinc.

Galvani connected the spinal cord of a freshly dissected frog to an iron rail and a brass hook this caused the frog’s leg to twitch.

This discovery led to much research resulting in the galvanic cell, batteries and the galvanization process.



Above are some alchemy symbols attributed to zinc, the first being the most common.

Provided by the element sponsor sponsor Jamie Tregear

ARTISTS DESCRIPTION

Zinc was used in prehistoric times when it was alloyed with copper to make brass. It was also used widely for this purpose in ancient India. The pure element was also first cast in India in the thirteenth century. I have used a design from an old brass Indian table top, against a metallic brass background to highlight this ancient use of zinc.

CATH DE LITTLE